



CITY OF NEWTON, MASSACHUSETTS

Department of Planning and Development

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Setti D. Warren
Mayor

Public Hearing Date:	October 12, 2010
Land Use Action Date:	December 14, 2010
Board of Aldermen Action Date:	January 3, 2011
90-Day Expiration Date:	January 4, 2011

DATE: October 4, 2010

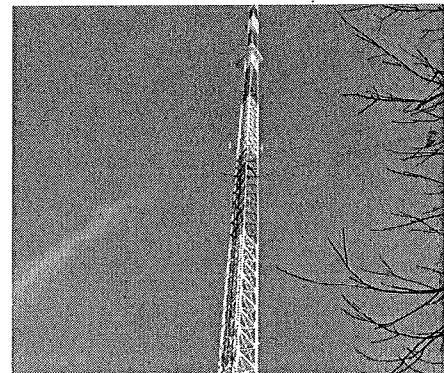
TO: Board of Aldermen

FROM: Candace Havens, Interim Director of Planning and Development
Eve Tapper, Chief Planner for Current Planning **ET**
Maurya Sullivan, Principal Planner/Telecommunications Specialist

SUBJECT: #248-10 SCONNIX REALTY TRUST/ATS – NEEDHAM, LLC petition to amend and consolidate special permits and site plans approved via prior special permit nos. 105686, April 5, 1954, 781-73(2) and 462-05 and to extend a nonconforming structure/use (tower/transmission station) for existing equipment located at 1165 CHESTNUT STREET, Ward 5, Newton Upper Falls, on land known as SBL 51, 45, 5, containing approximately 330,000 sq. ft. of land in a district zoned MULTI RESIDENCE 1. (Ref: Sec 30-24, 30-23, 30-18(c)(2), 30-18(A)(e)(5), 30-18A(e)(7)d, 30-18(A)(e)(8), 30-18(A)(f), 30-21(b), 30-8(b)(9), 30-9(b)(1) of the City of Newton Rev Zoning Ord, 2007).

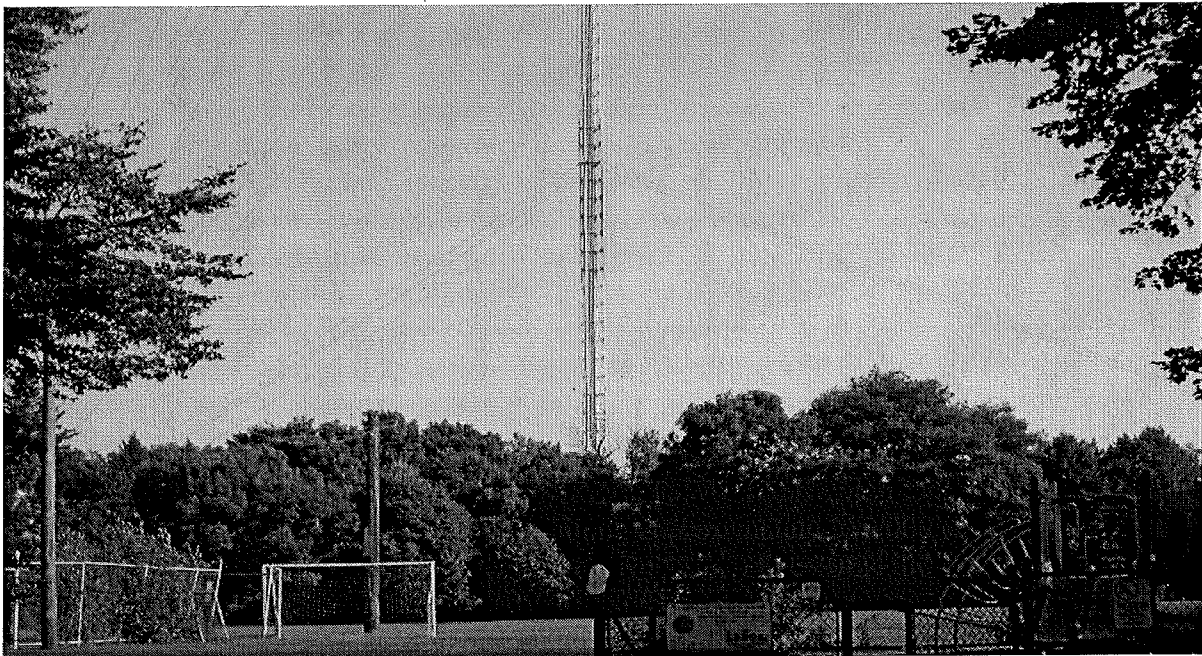
CC: Mayor Setti D. Warren

The purpose of this memorandum is to provide the Board of Aldermen and the public with technical information and planning analysis which may be useful in the special permit decision making process of the Board of Aldermen. The Planning Department's intention is to provide a balanced view of the issues with the information it has at the time of the public hearing. There may be other information presented at or after the public hearing that the Land Use Committee of the Board of Aldermen will want to consider in its discussion at a subsequent Working Session.



EXECUTIVE SUMMARY

The property consists of a 1,249' tower supported by guyed-wires. The site contains multiple antennas, related buildings and equipment. The tower was originally permitted as a television transmission tower in 1954. Pursuant to §30-18A(e)(8) and in compliance with Board Order #462-05, condition #16(i), petitioners seek a special permit to legalize existing antennas and related equipment. Additionally, petitioners seek to add an additional earth satellite dish, to replace and relocate a generator, and to amend the approved site plan including the addition of snow covers and sound reduction materials. Both petitioners and the City seek to consolidate all previous special permits and approvals into the decision addressing the current petition. The proposed installation meets the §30-18A(c) design and operating criteria for wireless installations. Section 30-18A(a) encourages the co-location of wireless equipment on existing structures to reduce the need for additional tall towers.



BACKGROUND

The permissive use for the original radio station and tower were granted in 1954 (B.O. #105686). Prior Board Orders are included as *ATTACHMENT "A."* In 1967, television transmission commenced. Board Orders #781-73(2) and #781-73(3) allowed the construction of a two-story transmission station. A new 1,351' tower approved by B.O. #285-98 was never built. Wireless antenna installations were approved and added to the tower in 1991 and in 1997. In 1999, the Board approved a Bell Atlantic underground "telco" vault along the driveway entrance behind 1159 Chestnut Street. Over the years, antennas and equipment were added to the site without City approval. In 2006 (B.O. #462-05), the Board approved an amended site plan allowing the

addition of two dish antennas and expansion of the transmission building *with the condition that the property owner file for a special permit to legalize the dishes and other equipment that had been added to the site without approval*. The pathway easement between Braceland Park and the railroad bridge requested by the City was granted and approved in 2007. In February 2010 (docket #8-10), Clearwire sought to add an additional wireless installation. That petition has been continued pending the owners' compliance with the 2006 condition. Therefore, petitioners now seek to legalize all existing antennas and other equipment related to the tower. In addition, petitioners seek to add an additional earth satellite dish, to replace and relocate a generator and to amend the approved site plan, including the addition of snow covers and sound reduction materials.

I. SIGNIFICANT ISSUES FOR CONSIDERATION

In reviewing this petition the Board should consider:

- Whether this is an appropriate location for additional wireless installations; and
- Whether the addition of the antennas and ancillary equipment will have an impact on the surrounding neighborhood.

II. CHARACTERISTICS OF THE SITE AND NEIGHBORHOOD

A. Neighborhood and Zoning

The property is located on the southwest side of Chestnut Street, adjacent to the Charles River in Newton Upper Falls. It is located within a Multi Residence 1 district (*ATTACHMENTS "B" AND "C"*). The neighborhood contains a mix of uses. There are commercial uses along Chestnut Street to the east and residential uses, primarily one- and two-family houses in the remainder of the neighborhood. The site is bounded on the north by the Braceland Playground, which is in a Public Use District. Further to the north and east is a residential area included in a much larger Multi-Residence 1 District. Immediately to the south is the primary abutter, the 35-unit Chestnut Grove Condominium complex. The southeastern boundary is formed by an unused rail right-of-way, and the western boundary is formed by the Charles River.

B. Site

The approximately 330,000 sq. ft. site¹ contains a television tower with existing broadcast antennas and wireless installations. The tower was constructed in 1954. In subsequent years, the use of the tower was expanded. Presently, the property is used for structures and equipment supporting television and FM radio broadcasting, and analog and digital telecommunications of all types. The site also contains a townhouse condominium complex constructed in 1987. The complex is located

¹ The City's database shows the property as two separate parcels: SBL 51, 45, 5 (284,000 sq. ft.) and SBL 51, 45, 7 (202,720 sq. ft.) with the tower, transmission building and condominium buildings all located on SBL 51, 45, 7. The Engineering Department is conferring with petitioner to determine whether a 1986 subdivision plan is accurately recorded in City records.

along Chestnut Street, and the television tower is located between the condominiums and the Charles River. The site slopes downwards towards the river.

III. PROJECT DESCRIPTION AND ANALYSIS

A. Land Use

The site is currently used for a television and FM radio broadcasting tower, and analog and digital telecommunications of all types. In addition there is a residential townhouse complex. The petitioners propose to legalize existing equipment on the tower and the site, to add an additional earth satellite dish, to replace and relocate a generator, and to amend the approved site plan, including the addition of snow covers, landscaping, and sound reduction materials.

B. Site Design

The application covers all the existing structures, equipment, antennas, appurtenances, and site improvements except for those approved in prior special permits. These are accurately depicted on the detailed tower profile drawing and equipment inventory (*ATTACHMENT "D"*). In addition, petitioners seek to add one additional earth satellite dish; to replace and relocate a generator; and, to amend the approved site plan including the addition of snow covers, landscaping, and sound reduction materials.

C. Parking and Circulation

The existing installation includes driveway access from Chestnut Street. Petitioners propose to continue using the same access road. There will not be any personnel on-site except for a weekly vehicle trip to check the site. These additional trips will not have a significant impact on Chestnut Street or on the Upper Falls neighborhood.

D. Landscape Screening and Lighting

Petitioners have replaced the coniferous trees removed by others. These trees screen the view of the building extension from the condominiums. Petitioners propose to locate several additional trees up the slope to provide more effective screening.

IV. COMPREHENSIVE PLAN

There is little discussion of wireless installations in the 2007 *Newton Comprehensive Plan*. However, the *Comprehensive Plan* says that "development is to be guided to reflect the character held or sought by existing residential neighborhoods, protecting the qualities of that which exists." By adding additional wireless antennas and dishes to an existing television tower, this proposal minimizes changes to the character of this site and minimizes potential changes to the character of other sites that could be alternatives to this site. Petitioners offer additional landscape screening, noise mitigation, and RF remediation, which will enhance the residential quality of the neighborhood.

V. TECHNICAL REVIEW

- A. Technical Considerations (Section 30-15). The Zoning Review Memorandum (*ATTACHMENT "E"*) provides an analysis of the proposal. A special permit is required to amend an existing site plan approved by board order, to add additional equipment, and to modify the existing wireless installations. The existing installation and the proposed modifications meet the design and operating criteria found in §30-18A(c).
- B. Waiver from 30-day removal requirement for unused equipment (§30-18A(c)(2)) and §30-18(A)(i). The 30-day maximum period for removal of abandoned or inactive equipment is impractical for some of the components of the broadcast tower and attendant structures. Therefore, petitioners seek to extend the removal period to 90 days for equipment affixed above 500'. Furthermore, petitioners seek a longer period (to be determined by the Commissioner of Inspectional Services) for removal of all or part of the tower or of the broadcast transmission building. Planning Staff recommend that petitioners be required to post a removal bond to insure removal should petitioners be financially unable or fail to remove any components within the required time-frame.
- C. Parking Requirements (§30-19). The proposed changes do not trigger any additional parking requirements.
- D. Other Reviews
 1. Engineering. No engineering review is necessary because the petition will not increase or modify impervious surfaces on site.
 2. Conservation. The Conservation Commission approved the site with certain requirements as to clean-up, silt fencing, and locating earth station dishes on the ground, all of which have been implemented and completed to the Commission's satisfaction.
 3. Fire Department. Because there are no changes to the site plan other than the addition of several antennas to the existing tower, no fire access review is necessary. Fire prevention review will occur as part of the building permit application process.

VI. ZONING RELIEFS SOUGHT

Based on the completed zoning review (*ATTACHMENT "E"*), the petitioners seek waiver, approval through or relief from:

- §30-18A(e)(5), which allows the Board of Aldermen to grant a special permit for the addition of earth satellite antenna dishes

- §30-18A(e)(8), which allows the Board of Aldermen to grant a special permit for modification or addition to communication equipment on an existing tower in a residential district
- §30-18A(f), which allows the Board of Aldermen to amend and consolidate the site plan and special permits approved through Board Orders #105686, #781-73(2), #781-73(3), #285-98, #33-99(2) and #462-05
- §30-24, which allows the Board of Aldermen to grant a special permit for wireless communication equipment when §30-18A(a) and §30-18A (c) have been satisfied
- §30-23, which allows the Board of Aldermen to grant site plan approval
- §30-21(b) which allows the Board of Aldermen to grant an extension of nonconforming structure (tower) and transmission station
- Waiver from §30-18A(c)(2) which requires removal of wireless communication equipment within thirty days following the cessation of its use
- §30-8(b)(9) and §30-9(b)(1) which allow the Board of Aldermen to allow structures and equipment supporting television & FM radio broadcasting stations in a residential district

VII. Summary of Petitioners' Responsibilities

This petition is currently complete.

ATTACHMENTS

ATTACHMENT A:	<i>Prior Board Orders</i>
ATTACHMENT B:	<i>Zoning Map</i>
ATTACHMENT C:	<i>Land Use Map</i>
ATTACHMENT D:	<i>Tower Profile Drawing and Equipment Inventory</i>
ATTACHMENT E:	<i>Zoning Review Memorandum</i>
ATTACHMENT F:	<i>RF Emissions Report</i>
ATTACHMENT G:	<i>Sound Reduction Plan</i>

CITY OF NEWTON

IN BOARD OF ALDERMEN

June 28, 1954

ORDERED:

That petition for variance of application of the Zoning Ordinance, under the provisions of Section 23.11, be and is hereby granted, subject to other provisions of the Zoning Ordinance and the Building Code of the City of Newton, viz:

Petition No. 106238

Petitioner: Allen B. DuMont Laboratories, Inc.

Location of land, street and number, etc.:
51 Winchester Street, at southwest corner of Curtis Street and Winchester Street, Ward 5.

Description of land as now zoned, size of lots, etc.:
Manufacturing District. A lot of 80,625 sq. ft.

Description of variance desired, size of lots:
Requests permission to erect a transmission tower exceeding 60 feet allowable in manufacturing district. Note: Petition granted on condition that this transmission tower be limited to use in Channel 5.

Description of use to be made of land if variance is granted:
Transmission Station.

#46

On motion of Alderman Cannon,

Read and adopted,
1 voting Nay

EXECUTIVE DEPARTMENT
Approved..... 1954

(sgd) Monte G. Hasbun

A TRUE COPY
ATTEST: Clerk. (sgd)

Monte R. Bo.

ATTACHMENT A

Dec 20, 73 Bk 12577 1588

453

BOARD OF ALDERMEN RECORD, April 5, 1954

VI. MOTIONS, ORDERS, Etc.

2. That no car shall be parked within ten
(10) feet from the McLaughlin property line.

(2)
#105684

ORDERED:

That Petition No. 105536 of Andrew Hain and Marjorie P. Hain, for permit to use frame building, hitherto used as a nursing home for ten (10) patients, at 38 Lake Avenue, Ward 6, in the Single Residence "B" District, as a nursing home for twelve (12) patients, be and is hereby granted under the provisions of Section 23.3 (b) (2) of the Zoning Ordinance, Revised Ordinances of the City of Newton, Massachusetts, 1952, and under the provisions of the General Laws.

#105685

This permit shall be in force only during such time as these premises are owned or leased by the said Andrew Hain and Marjorie P. Hain.

The following order was read and adopted, President Bauckman voting Nay.

ORDERED:

That petition for variance of application of the Zoning Ordinance, under the provisions of Section 23.4 (d) (12) and Section 23.11, be and is hereby granted, subject to other provisions of the Zoning Ordinance and the Building Code of the City of Newton, viz:

#105686

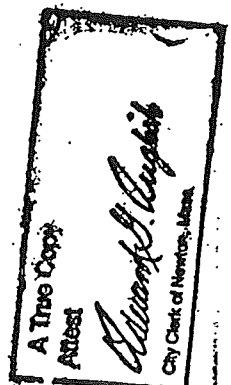
Petition No. 105542

Petitioner: Esther Marcy and Mildred Marcy, and New York, New Haven, and Hartford Railroad

Location of land, street and number, etc:
Rear 1173 Chestnut Street and land of the New York, New Haven and Hartford Railroad, Ward 5.

Description of land as now zoned, size of lots, etc.:
Private Residence District.

Description of variance desired, size of lots, etc:
Permission to erect a transmission tower exceeding 40 feet allowable in Private Residence District. Note: Petition granted on condition that this transmission tower be limited to use in Channel 5.



VI. MOTIONS, ORDERS, Etc.

Description of use to be made of land if variance is granted:
Transmission station.

(2)
#105686

The following orders were read twice and adopted,
under suspension of rules, twenty-one Yeas, with exception
as noted in Order #105688.

#105687

ORDERED:

That in accordance with recommendations of His Honor
the Mayor, the following sums aggregating two thousand, one
hundred twelve dollars and seventy-seven cents (\$2,112.77), to
be taken from revenue to be derived from the assessment and
collection of taxes for 1954, be and are hereby appropriated,
granted, and expenditure authorized, under direction of His
Honor the Mayor, by the Law Department, for the following
purposes:

Boston & Albany Railroad Company and New York Central
Railroad Company, award for land damages, property
taken by eminent domain by Order #96566 adopted
March 6, 1950, off Border Street, Ward 3 \$1,000.00

Settlement of claim, Eleanor R. Fisher, arising out
of fall in tunnel under railroad track at Auburn-
dale Station, August 10, 1953, to be paid to
Eleanor R. Fisher and Edmund F. Kneeland,
Attorney 300.00

Settlement of claim, Mary B. McGoldrick, arising
out of fall on Washington Street near corner
Commonwealth Avenue, October 13, 1950, to be
paid to Mary B. McGoldrick and Joseph E. Levine,
Attorney 700.00

Settlement of claim, The Newton Graphic, for bills
incurred by City Clerk Dept., for various legal
advertisements in 1952 and 1953, re. registration
dates, elections, and public hearing 112.77

A True Copy
Attest
Edward J. August
City Clerk of Newton, Mass.

#105688

ORDERED:

That in accordance with recommendation of His Honor
the Mayor, the following sums aggregating nine hundred forty-
seven dollars (\$947.00), to be taken from revenue to be derived
from the assessment and collection of taxes for 1954, be and
are hereby appropriated, granted, and expenditure authorized,
under direction of His Honor the Mayor, by the following
departments, for the following purposes:

VI. MOTIONS, ORDERS, Etc.

There being no further business, the Board adjourned on Tuesday, April 6, 1954, at 12:25 o'clock A.M., to Tuesday, April 20, 1954, at 7:45 o'clock P.M.

Wm. S. Barber
Wm. S. Barber

Clerk.

The following numbered votes and orders adopted at the foregoing meeting were duly approved by His Honor the Mayor on Thursday, April 8, 1954, viz:

Motion:

#105678

Orders:

#105679	#105685	#105691	#105697	#105703	#105710
105680	105686	105692	105698	105704	105711
105681	105687	105693	105699	105705	105712
105682	105688	105694	105700	105706	105713
105683	105689	105695	105701	105707	105714
105684	105690	105696	105702	105708	105715
				105709	105716

Wm. S. Barber
Wm. S. Barber

City Clerk.

The following numbered votes and orders adopted by the Board of Aldermen at meeting held on Monday, April 5, 1954, be and are hereby approved, viz:

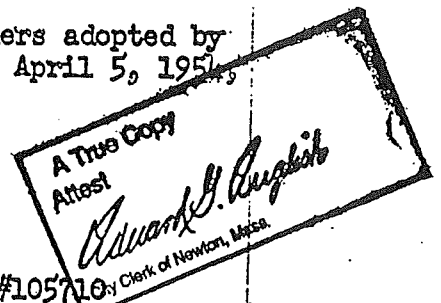
Motion:

#105678

Orders:

#105679	#105685	#105691	#105697	#105703	#105710
105680	105686	105692	105698	105704	105711
105681	105687	105693	105699	105705	105712
105682	105688	105694	105700	105706	105713
105683	105689	105695	105701	105707	105714
105684	105690	105696	105702	105708	105715
				105709	105716

Howard Whitmore, Jr.
HOWARD WHITMORE, Jr., Mayor.



JAN 11-74 AM 11:45 066RE ***5.00

BK 12577 PG 588

pl 5 -

THE COMMONWEALTH OF MASSACHUSETTS

NEWTON
CITY

BOARD OF ALDERMEN

December 20, 1973

NOTICE OF VARIANCE

Conditional or Limited Variance or Special Permit
(General Laws Chapter 40A, Section 18 as amended)

Notice is hereby given that a Conditional or Limited Variance or Special Permit has been granted

To WHDH Corporation
Owner or Petitioner

Address

City

1165 Chestnut Street, Ward 5, Section 51, Block 45, Lots 5 and 7
Identify Land Affected

by the City of Newton Board of Aldermen affecting the
rights of the owner with respect to the use of premises on

1165 Chestnut Street, Newton Upper Falls

the record title standing in the name of

Mildred Marcy

whose address is 1173 Chestnut Street, Newton, MASS.

by a deed duly recorded in the Middlesex South County Registry of Deeds in Book

5673 Page 214 Registry District of the Land Court

Certificate No. Book Page

The decision of said Board is on file with the papers in Decision or Case No. 781-73(2)

In the office of the City Clerk of Newton

Signed this 20th day of December, 1973

Board of Aldermen

Eliot K. Cohen President
Joseph H. Karlin Clerk

19 at o'clock and minutes M.

Received and entered with the Register of Deeds in the County of

Book Page

ATTEST

Register of Deeds

Notice to be recorded by Land Owner.

CITY OF NEWTON

#781-73(2)

IN BOARD OF ALDERMEN

December 17, 1973

ORDERED:

That the Board finding that the public convenience and welfare will be substantially served by its action and that said action will be without substantial detriment to the public good, and without substantially derogating from the intent or purpose of the Zoning Ordinance, the following PERMISSIVE USE is hereby granted, in accordance with the recommendation of the Land Use Committee and the reason given by the Committee therefor through its Chairman, Alderman Alan S. Barkin.

Petition Number: #781-73(2)

Petitioner: WHDH Corporation, Lessee

Location: 1165 Chestnut Street, Newton Upper Falls, Ward 5.
Block 45, Lots 5 and 7, containing approx.
447,080 square feet.

To be used for: Radio and television transmission station.

Construction: None (steel tower and concrete building housing transmitters are existing)

Explanatory Note: Permission to erect the existing tower and concrete building was granted by Board Order 105686 signed by Mayor Howard Whitmore on April 8, 1954. The current petition is necessitated by a condition contained within Board Order 105686 limiting use of the transmission tower to Channel 5, and seeks to remove the limitation established by Board Order 105686.

Land referred to is in the Private Residence District.

Approved subject to the following conditions:

1. That no new or additional construction shall take place in conjunction with the existing radio and television transmission station.
2. That, with the exception of that condition limiting use of the transmission tower to Channel 5, all provisions of Board Order 105686 shall remain in full force and effect.

3. That this PERMISSIVE USE shall not obtain until:
- a. The petitioner shall have recorded with the Registry of Deeds for the Southern District of Middlesex County, a statutory notice of the granting of this PERMISSIVE USE with appropriate reference to the book and page of the recording of the petitioner's title deed or notice of lease endorsed thereon.
 - b. A certified copy of such recorded notice shall have been filed with the City Clerk and Public Buildings Department.

Under Suspension of Rules
Readings Waived & Adopted
22 Yeas 2 Absent
(Absent - Ald. Magni & Small)

EXECUTIVE DEPARTMENT

Approved Dec. 19, 1973

(Sgd) JOSEPH H. KARLIN City Clerk

(Sgd) ELIOT K. COHEN Acting Mayor

CITY OF NEWTON

#781-73(2)

IN BOARD OF ALDERMEN

December 17, 1973

ORDERED:

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2. That, with the exception of that condition limiting use of the transmission tower to Channel 5, all provisions of Board Order 105686 shall remain in full force and effect.

That this PERMISSIVE USE shall not obtain until:

- a. The petitioner shall have recorded with the Registry of Deeds for the Southern District of Middlesex County, a statutory notice of the granting of this PERMISSIVE USE with appropriate reference to the book and page of the recording of the petitioner's title deed or notice of lease endorsed thereon.
- b. A certified copy of such recorded notice shall have been filed with the City Clerk and Public Buildings Department.

Under Suspension of Rules
Readings Waived & Adopted
22 Yeas 2 Absent
(Absent - Ald. Magni & Small)

EXECUTIVE DEPARTMENT

Approved Dec. 19, 1973

(Sgd) JOSEPH H. KARLIN City Clerk

(Sgd) ELIOT K. COHEN Acting Mayor

WDSX. SO. DIST. FILE
 BOOK 17-1009 PAGE 215
 DATE 5-2-06
 TIME 12:43

CITY OF NEWTON

IN BOARD OF ALDERMEN

April 3, 2006

2006 APR -6 PM 12:56
 CITY CLERK
 NEWTON, MA. 02159

ORDERED:

That the Board finding that the public convenience and welfare will be substantially served by its action and that said action will be without substantial detriment to the public good, and without substantially derogating from the intent or purpose of the Zoning Ordinance, the following SPECIAL PERMIT/SITE PLAN APPROVAL and AMENDMENT TO PREVIOUSLY APPROVED SPECIAL PERMIT/SITE PLAN APPROVALS for the installation of two earth station dishes and associated ancillary equipment, construction of a building addition and a waiver of one parking stall is hereby granted, in accordance with the recommendation of the Land Use Committee and the reasons given by the Committee therefore, through its Chairman, Alderman George Mansfield:

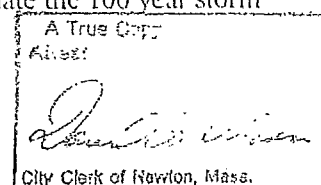
1. The Board finds that the public convenience and welfare will be served because:

- a. the installation of the two receiving dishes will improve broadcast services to the public;
- b. the petitioner has agreed to replace the equipment being approved in this special permit with smaller or interior mounted equipment if such improvements in equipment become feasible for this location;
- c. the proposed site work will upgrade the drainage system and improve the quality of stormwater run-off flowing into the Charles River;
- d. the proposed site work includes some improvements to wildlife habitat;
- e. the grant of a pedestrian easement will allow public access along the Charles River at this site and will permit the City to extend the Charles River Pathway consist with the City's Open Space Plan;

- f. the proposed materials and colors for the building addition and the use of snow covers on the proposed dishes will cause the building addition and dishes to be less obtrusive than the existing building and dishes when viewed from the abutting properties and the Charles River; and
- g. the proposed landscaping to be installed by the petitioner at its expense and located on the abutting property (1175 Chestnut Street) will provide additional screening of the building addition from the abutting residents.

2. The Board finds that the greater than 3 ft. change in grade is acceptable because:

- a. the upgrades to the drainage system have been designed to accommodate the 100 year storm event for the new impervious surfaces; and



29300/448

- b. the lowering of the grade and siting of the dishes and ancillary equipment on the west side of the building will reduce the visual impact of the dishes as the building addition will help to screen the two dishes from the abutting residents.
- 3. The Board finds that waiver to the parking ordinance for one parking stall is appropriate for this site because:
 - a. the transmission station at this site is unmanned and the parking facility is only utilized for maintenance and repairs services; and
 - b. the waiver reduces the amount of pavement on-site while still providing sufficient parking for the demand associated with the transmission station.

PETITION NUMBER: #462-05

PETITIONER: E. W. Scripps Networks/Sconix Realty Trust/ATS Needham LLC.

LOCATION: 1165 Chestnut Street, Section 51, Block 45, Lot 5 containing approximately 330,000 sq. ft. of land.

OWNER: Sconix Realty Trust/ATS Needham LLC.

ADDRESS OF OWNER: 10 Presidential Way, Woburn, MA 01801

TO BE USED FOR: A maximum of two (2) 12.5 ft. diameter earth station dishes on a new 1,071 sq. ft. concrete pad, and construction of a 1,500 sq. ft. addition to the existing building for accessory electronic equipment

CONSTRUCTION: Dishes – Fiberglass and aluminum; building addition – concrete block.

EXPLANATORY NOTE: Sections 30-8(b)(8) and 30-9(b)(1) – for approval of expanded television transmission station on a site zoned MR-1;

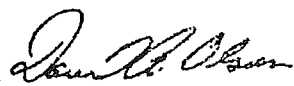
Sections 30-8(b)(9) and Section 30-9(b)(1) – for approval of structures supporting television receiving station, including dish antennas on a site zoned MR-1;

Section 30-18A(e)(5) – for approval of two receive-only dish type earth station satellite antennas, associated ancillary equipment, not otherwise allowed as-of-right.

Section 30-19(d)(15) – for an exception through Section 30-19(m) to allow for a waiver of one of six required parking stalls.

Section 30-5(b)(4) – for a special permit to allow for the existing grade to be altered by more than (3) three feet.

Attest



City Clerk of Newton, Mass.

Section 30-24 – for a special permit to allow for the installation of earth station dishes, the support equipment and construction of a 1,500 sq. ft. addition to the existing transmission station building.

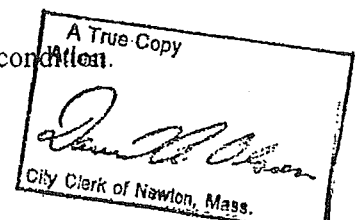
Section 30-24(d) – for an amendment to Board Orders #105686 and #781-73(2), generally, to allow for the installation of the two new dishes and related ancillary equipment and to Board Order #781-73(2), Condition #1, which currently prohibits additional construction and expansion of transmission facility building.

Section 30-23 – for site plan approval and amendment to the previously approved site plans.

Land referred to is in a Multi-Residence I District.

Approved, subject to the following conditions:

1. All buildings, parking areas, driveways, walkways, landscaping and other site features associated with this special permit shall be located and constructed consistent with the following:
 - a. Site Engineering and Landscape Plans, prepared by Daylor Consulting:
 - i.) Sheet 1, "Cover Sheet," dated January 10, 2006, revised: March 28, 2006;
 - ii.) Sheet 2, "Existing Conditions Plan," dated January 10, 2006;
 - iii.) Sheet 3, "Proposed Layout Plan," dated January 10, 2006, revised: 1/30/06 and 3/17/06;
 - iv.) Sheet 4, "Grading Plan," dated: January 10, 2006, revised: 1/30/06 and 3/17/06; and
 - v.) Sheet 5, "Planting Plan," dated: January 10, 2006, revised: March 28, 2006
 - b. Architectural Plans for the "Transmission Station Expansion, Newton Upper Falls, MA," prepared by William Reese Schroeder:
 - i.) Sheet A01 "Floor Plan," dated 1/18/06;
 - ii.) Sheet A02 "East & West Elevations," dated 1/18/06; and
 - iii.) Sheet A03 "North & South Elevations" dated 1/18/06
2. The two dishes and accessory equipment shall be installed and maintained in compliance with all applicable federal and state regulations.
3. Any new security lighting on the new building addition shall be shielded Metal Halide or equivalent and shall not spill over on abutting properties.
4. The equipment shall be maintained in good working order and in a safe condition.

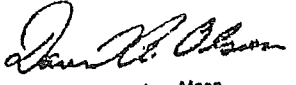


5. Within 30 days of termination of use, the two dishes and all related ancillary equipment shall be removed from this site.
6. If new technological changes permit smaller or internal equipment, the petitioner shall take advantage of such changes and replace the equipment approved herein to the extent feasible at this location, and approval for such replacement shall not be unreasonably withheld by the property owner of 1165 Chestnut Street.
7. The petitioner shall submit, for review and approval by the Law Department, draft language for the pedestrian pathway easement, which will allow for extension of the Charles River Pathway along the Charles River. The final easement shall be recorded prior to the issuance of any certificates of occupancy.
8. The petitioner shall submit a plan for the installation, at its sole expense, of at least eight 10'-12' tall pine trees on the abutting property at 1175 Chestnut Street to help screen the new building addition, dishes and ancillary equipment from the abutting neighbors. The plan shall be developed in consultation with representatives of the Chestnut Grove Condominium Trust after the construction of the building addition, and shall be submitted for review and approval by the Director of Planning and Development. The petitioner, if permitted by Chestnut Grove Condominium Trust, shall install the trees prior to the issuance of final occupancy permits. Once installed, the petitioner shall assign any warranties or guarantees covering the trees to the Chestnut Grove Condominium Trust and shall have no obligation to maintain the trees.
9. The landscaping approved by this special permit and installed on this site shall be maintained in good condition. All plant material approved under this special permit, on this site and on the abutting 1175 Chestnut Street site, that becomes diseased or dies shall be replaced on an annual basis with similar material.
10. The petitioner shall install Satellite Antenna Snow Covers, by Patriot Antenna Systems, or equivalent, and the back sides of the dishes shall be painted gray in order to diminish the visual impacts of the dishes, when viewed from the Charles River and/or abutting properties.
11. The property owner, American Tower Broadcasting Company, and/or the respective tenants shall remove the nine (9) existing dishes that are no longer in use as identified in their March 10, 2006 correspondence, on file with the City Clerk. In addition, all ancillary equipment associated with those nine (9) dishes shall also be removed.
12. Except as amended by this Board Order, conditions of Board Orders #105686 and #781-73(2) shall remain in effect.
13. The petitioner shall comply with the City's Noise Ordinance, Section 20-13 of the Revised Ordinances of the City of Newton, 2001.
14. Prior to the issuance of a building permit, the petitioner shall submit a construction management plan, for review and approval by the Commissioner of Inspectional Service, the Director of Planning and Development and the City Engineer. The construction management plan shall be

A True Copy
of
James H. Olson
City Clerk of Newton, Mass.

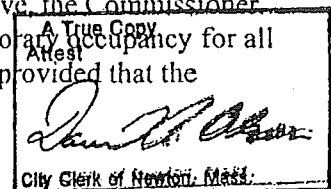
developed in such a way to minimize impacts on abutting neighbors and shall include, but not be limited to:

- a. The proposed hours of constructions;
 - b. The proposed location of contractor and subcontractor parking, on-site material storage area(s), on-site staging area(s) for delivery vehicles, and location of any security fencing. If trucks cannot be accommodated on site, an off-site staging area should be identified to prevent any trucks from queuing on Chestnut Street. The petitioner shall use its best efforts to have truck deliveries arrive during non-peak traffic hours.
 - c. The proposed truck route shall be shown and should be developed in such a way to minimize travel on local streets.
 - d. The proposed methods for dust control shall be identified, and shall include, but not be limited to: using covered trucks for transportation of excavated material; minimizing storage of debris on-site by using on-site dumpsters and regularly emptying them; using tarps to cover piles of bulk building materials and soil; and location of a truck washing station, to clean muddy wheels on all truck and construction vehicles before exiting the site.
 - e. The proposed methods for noise control, in accordance with the City of Newton's Ordinances. Staging activities should be conducted in a manner that will minimize off-site impacts of noise and noise producing staging activities should be located as far as practical from noise sensitive locations.
 - f. The proposed method for protection of existing trees in and around the areas of the site where construction activities will be conducted.
15. No building permits for the installation of the two satellite dishes, building addition, and associated site work covered by this SPECIAL PERMIT/SITE PLAN APPROVAL shall be issued until:
- a. A final landscape plan indicating the location, number, size and type of landscaping and landscaping materials to be installed on the subject property shall have been submitted to the Director of Planning and Development for review, and a statement certifying consistency with the plans cited in Condition #1 shall have been filed with the City Clerk and Department of Inspectional Services.
 - b. The petitioner shall submit specifications and color samples for the Satellite Antenna Snow Covers, in accordance with Condition 9., to the Director of Planning and Development for review and approval.
 - c. The petitioner shall submit final elevations and material samples and colors for the roof and façade for the proposed building addition for review and approval by the Director of Planning and Development.
 - d. The petitioner shall submit final site engineering plans, in accordance with the memorandum from the Associated City Engineer, dated March 15, 2006, on file with the City Clerk, to the City Engineer for review and approval. A copy of the recorded Board Order shall be

A True Copy
Attest

City Clerk of Newton, Mass.

submitted with the final site engineering plans.

- e. The petitioner shall have complied with the Tree Preservation Ordinance.
 - f. The petitioner shall have recorded with the Registry of Deeds for the Southern District of Middlesex County a Certified copy of this Board Order granting this SPECIAL PERMIT / SITE PLAN APPROVAL with appropriate reference to the book and page of the recording of the Petitioner's title deed or notice of lease endorsed thereon.
 - g. A certified copy of such recorded notice shall have been filed with the City Clerk, the Inspectional Services Department, and the Department of Planning and Development.
16. No portion of the dish installation and new building addition subject to this SPECIAL PERMIT/SITE PLAN APPROVAL shall be utilized or occupied until the following have been completed:
- a. The petitioner shall have filed with the City Clerk, the Department of Inspectional Services and the Department of Planning and Development a statement by a registered architect or registered engineer certifying that Condition #1. has been complied with.
 - b. The easement language shall have been reviewed and approved by the Law Department and the final easement for the pedestrian pathway along the Charles River shall have been recorded.
 - c. There shall have been filed with the City Clerk, the Department of Inspectional Services and the Department of Planning and Development a statement by the City Engineer certifying that the final construction details have been constructed to standards of the City of Newton Engineering Department.
 - d. There shall have been submitted to the City Engineer final as-built, record site engineering, in digital and paper format, with the latter sealed by a licensed surveyor, prior to the issuance of any final occupancy permits.
 - e. The petitioner shall have submitted a plan for the installation of pine trees on the abutting property, 1175 Chestnut Street, for review and approval by the Director of Planning and Development, in accordance with Condition 8., above, and the trees shall have been planted.
 - f. There shall have been filed with the City Clerk and the Department of Inspectional Services a statement by the Director of Planning and Development approving final location, number and type of plant materials, final landscape features, signage, and parking areas.
 - g. Notwithstanding the provisions of Conditions #16. e. and 16.f., above, the Commissioner of Inspectional Services may issue one or more certificates of temporary occupancy for all or portions of the building prior to installation of final landscaping provided that the



Petitioner shall first have filed with the Director of Planning and Development a bond, letter of credit, cash or other security in the form satisfactory to the Director of Planning and Development in an amount not less than 135% of the value of the aforementioned remaining landscaping to secure installation of such landscaping.

- h. The property owner, American Tower Broadcasting Company, and/or their respective tenants shall have removed the nine (9) existing dishes that are no longer in use as identified in their March 10, 2006 correspondence, on file with the City Clerk. In addition, all ancillary equipment associated with those nine (9) inactive dishes shall also have been removed.
- i. The property owner, American Tower Broadcasting Company, and their respective tenants shall have filed copies of the appropriate permits for the six (6) existing active dishes that had been previously installed and which have been identified in the correspondence from American Tower Broadcasting Company, dated March 10, 2006, on file with the City Clerk. If the property owner and/or tenants cannot provide evidence that the dishes were properly permitted, they shall have filed for all necessary permits for those dishes and the associated ancillary equipment.


Under Suspension of Rules

Readings Waived and Approved

22 yeas 0 nays 1 absent (Ald. Johnson) 1 excused (Ald. Fischman)


The undersigned hereby certifies that the foregoing copy of the decision of the Board of Aldermen granting a SPECIAL PERMIT/SITE PLAN APPROVAL is a true accurate copy of said decision, the original of which having been filed with the CITY CLERK on April 5, 2006. The undersigned further certifies that all statutory requirements for the issuance of such SPECIAL PERMIT/SITE PLAN APPROVAL have been complied with and that all plans referred to in the decision have been filed with the City Clerk.

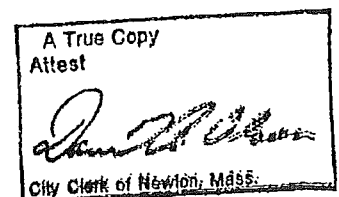
ATTEST:


(SGD) DAVID A. OLSON, City Clerk
Clerk of the Board of Aldermen

I, David A. Olson, as the Clerk of the Board of Aldermen and keeper of its records and as the City Clerk and official keeper of the records of the CITY OF NEWTON, hereby certify that Twenty days have elapsed since the filing of the foregoing decision of the Board of Aldermen in the Office of the City Clerk on 4/6/06 and that NO APPEAL to said decision pursuant to M.G.Laws Chapter 40, Section 17 has been filed thereto.

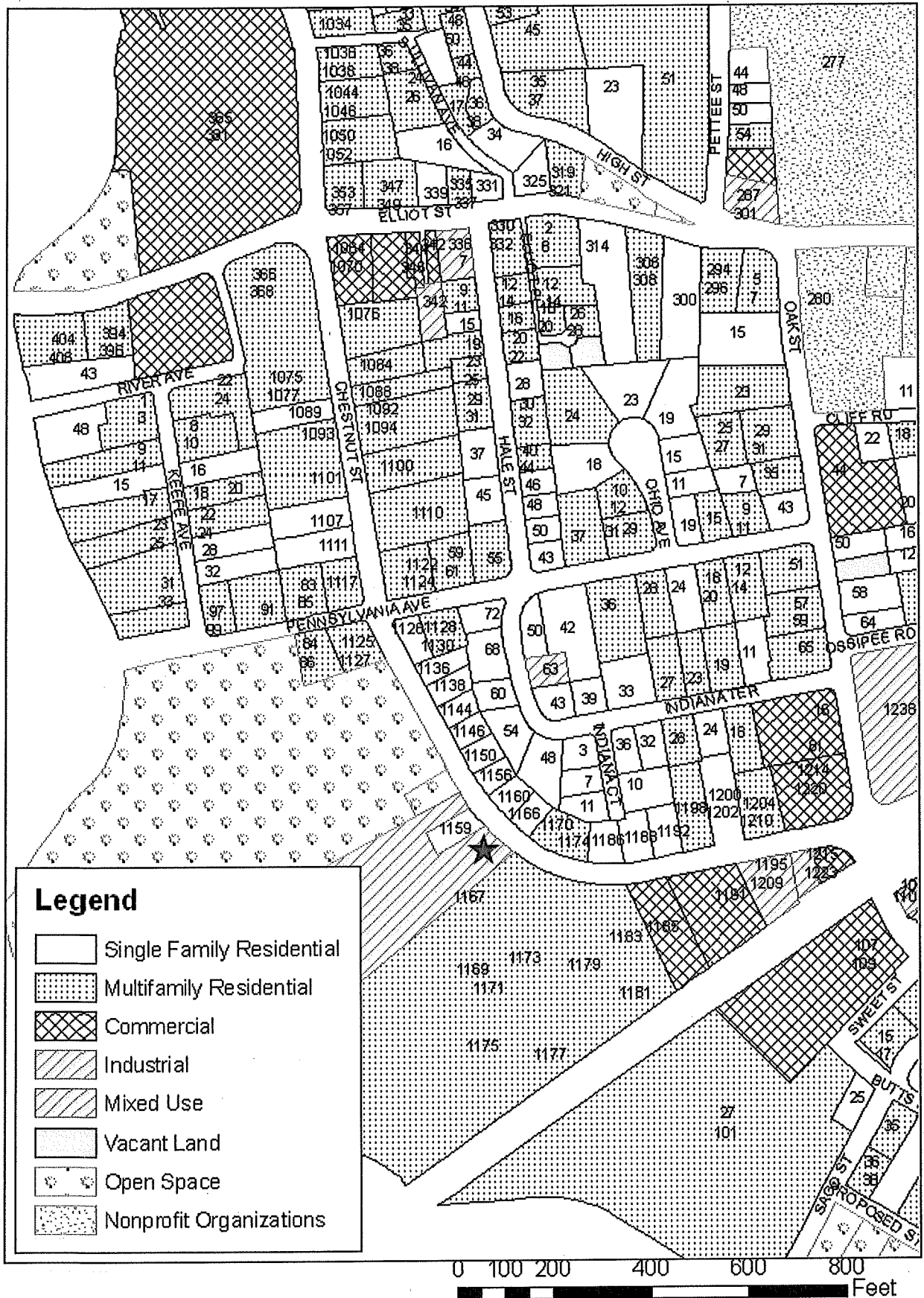
ATTEST:


(SGD) DAVID A. OLSON, City Clerk
Clerk of the Board of Aldermen

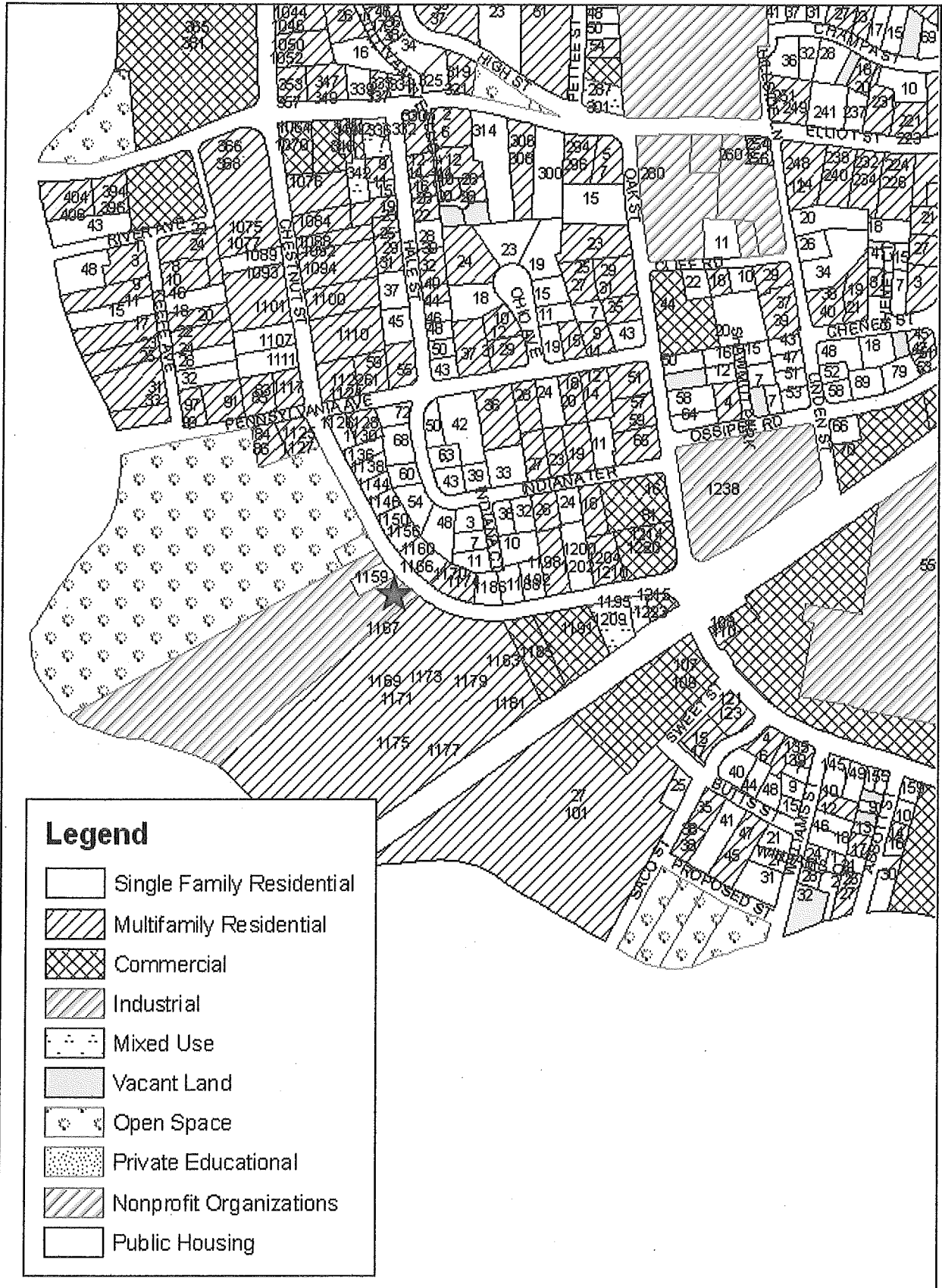
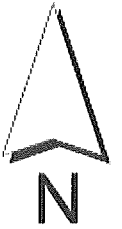


1165 Chestnut St. Vicinity Zoning











N




1165 Chestnut Vicinity Land Use



Legend

-  Single Family Residential
-  Multifamily Residential
-  Commercial
-  Industrial
-  Mixed Use
-  Vacant Land
-  Open Space
-  Private Educational
-  Nonprofit Organizations
-  Public Housing

0 100 200 400 600 800
 Feet

ATC Site # 1028

Dwg Rev 7-14-10

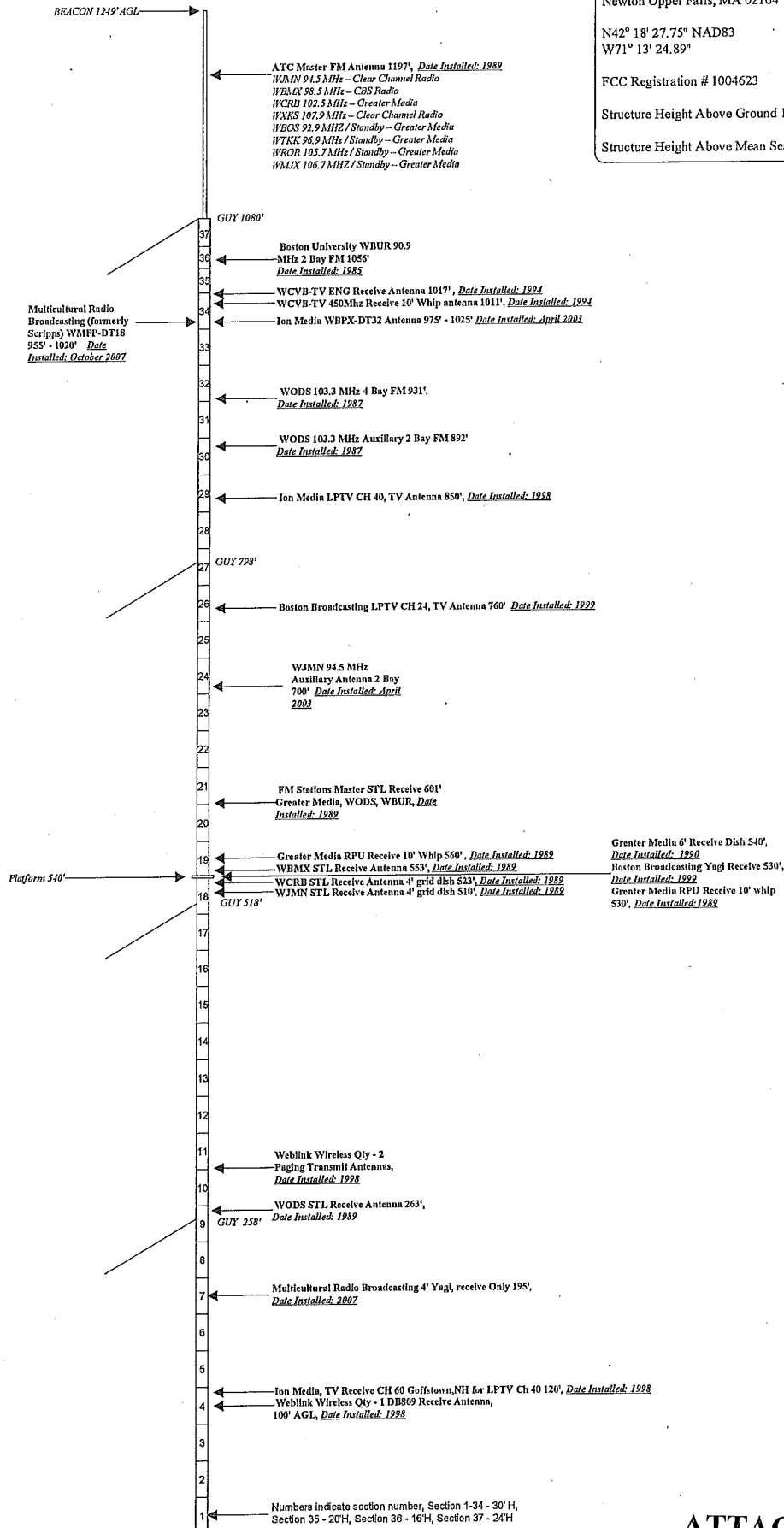
American Tower Corporation
1165 Chestnut St
Newton Upper Falls, MA 02164

N42° 18' 27.75" NAD83
W71° 13' 24.89"

FCC Registration # 1004623

Structure Height Above Ground 1253' / 381.9 M

Structure Height Above Mean Sea Level 1347' / 410.5 M



ATTACHMENT D

ATC Site # 1028

Dwg Rev 7-14-10

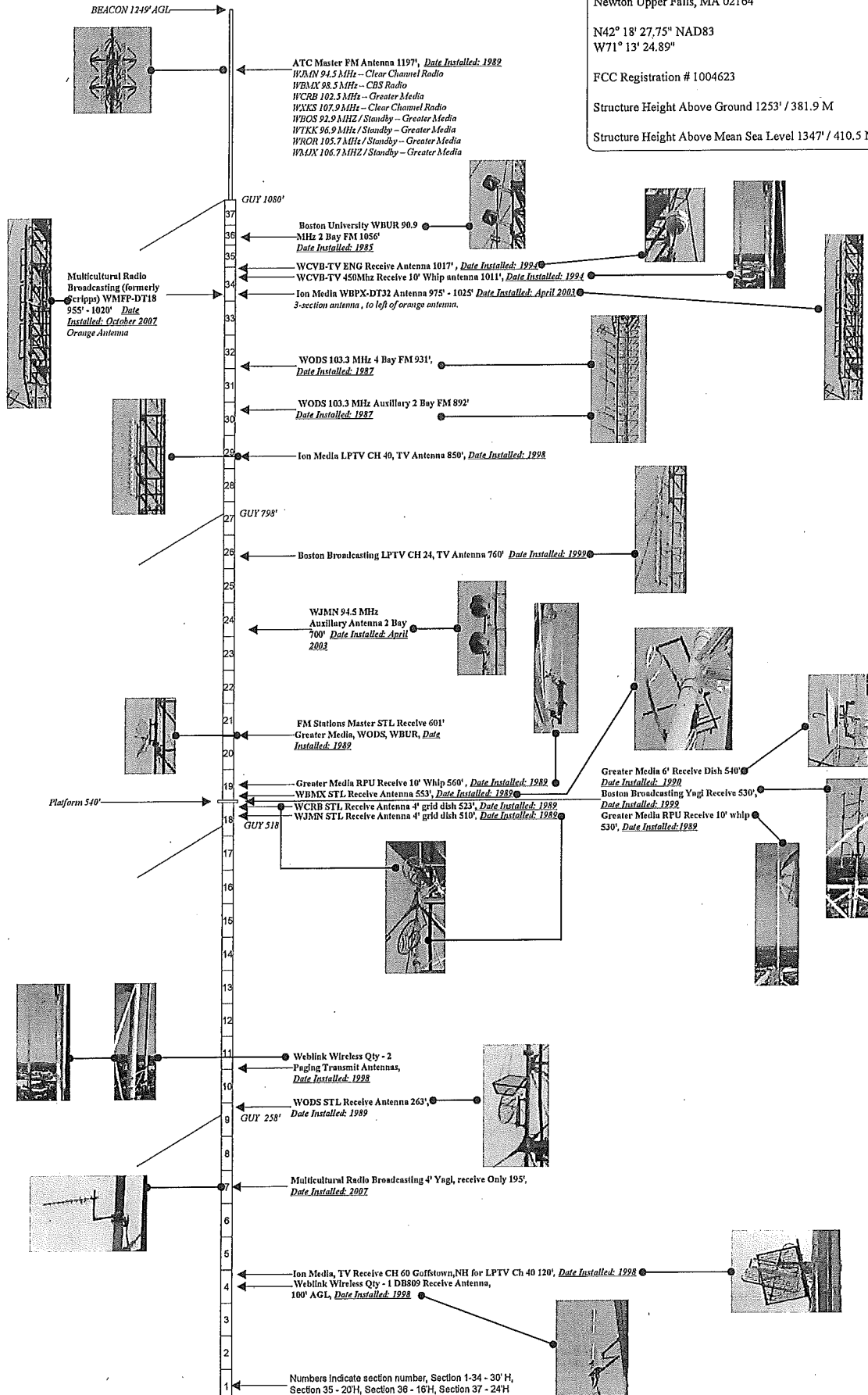
American Tower Corporation
1165 Chestnut St
Newton Upper Falls, MA 02164

N42° 18' 27.75" NAD83
W71° 13' 24.89"

FCC Registration # 1004623

Structure Height Above Ground 1253' / 381.9 M

Structure Height Above Mean Sea Level 1347' / 410.5 M



EXISTING BUILDING EQUIPMENT

Newton, MA - ATC# 1028

EQUIPMENT OWNER	MOUNT HEIGHT	ANTENNA TYPE	MOUNT LOCATION	EQUIPMENT USE	NUMBER OF UNITS
AMERICAN TOWER CORPORATION	Ground	NA	Ground	HVAC	3
AMERICAN TOWER CORPORATION	Wall	NA	Building Wall	HVAC	1
WBUR Boston Universit	ROOFTOP	GPS	Building Wall	Satellite Timing/Synchronization	1
WBUR Boston Universit	Ground	NA	Ground	HVAC	2
Ion Media Communications	ROOFTOP	VSAT	Rooftop	Satellite Programming Receive	1
Ion Media Communications	Ground	NA	Ground	HVAC	3
Ion Media Communications	Ground	NA	Ground	High Voltage Power Supply	2
Ion Media Communications	Ground	NA	Ground	Heat Exchanger	2
Multicultural Radio Broadcasting (Formerly Scripps)	Ground	VSAT	Ground	Satellite Programming Receive	1
Multicultural Radio Broadcasting (Formerly Scripps)	Ground	NA	Ground	HVAC	2
Multicultural Radio Broadcasting (Formerly Scripps)	Ground	NA	Ground	High Voltage Power Supply	2
Multicultural Radio Broadcasting (Formerly Scripps)	Ground	NA	Ground	Heat Exchanger	2
WODS-FM CBS Radio	Ground	NA	Ground	HVAC	2
WBMX CBS Radio	Ground	NA	Ground	HVAC	1
Boston Broadcasting Group	ROOFTOP	VSAT	Rooftop	Satellite Programming Receive	1
WJMN-FM Clear Channel	ROOFTOP	NA	Rooftop	HVAC	2
WJMN-FM Clear Channel	ROOFTOP	VSAT	Rooftop	Satellite Programming Receive	2
WBOS Greater Media	ROOFTOP	VSAT	Rooftop	Satellite Programming Receive	1
WBOS Greater Media	Ground	NA	Ground	HVAC	1
WKLB Greater Media	Wall	NA	Building Wall	HVAC	1
WKLB Greater Media	ROOFTOP	GPS	Building Wall	Satellite Timing/Synchronization	1
Weblink Wireless	ROOFTOP	VSAT	Rooftop	Satellite Programming Receive	1

SUMMARY

VSAT
HVAC
GPS
HV Power Supply
Heat Exchanger

Quantity
7
18
2
4
4

Boston Broadcasting Group	529'		YAGI	TOWER	BROADCAST ANCILLARY
WBOS Greater Media	529'		WHIP	TOWER	BROADCAST ANCILLARY
WKLB Greater Media	523'		GRID DISH	TOWER	BROADCAST ANCILLARY
WJMN-FM Clear Channel	510'		GRID DISH	TOWER	BROADCAST ANCILLARY
Weblink Wireless	302'		WHIP	TOWER	PAGING
Weblink Wireless	302'		WHIP	TOWER	PAGING
WODS-FM CBS Radio	263'		GRID DISH	TOWER	BROADCAST ANCILLARY
Multicultural Radio Broadcasting (Formerly Scripps)	195'		YAGI	TOWER	BROADCAST ANCILLARY
Ion Media Communications	120'		GRID DISH	TOWER	BROADCAST ANCILLARY
Weblink Wireless	100'		WHIP	TOWER	PAGING

SUMMARY

Quantity

FM Broadcast
TV Broadcast
Grid Dish
Solid Dish
Whip
Yagi
ENG

5
4
6
1
6
2
1

Zoning Review Memorandum

Proposed Wireless Communication Installation

Date: August 23, 2010

To: John Lojek, Commissioner of Inspectional Services

From: Maurya Sullivan, Principal Planner/Telecommunications Specialist *MS*

cc: Candace Havens, Chief Planner/Interim Director of Planning and Development
Eve Tapper, Chief Zoning Code Official
Jason Rosenberg, Esq.

**Re: Legalization of existing antennas and equipment on nonconforming tower in MR-1 District,
Addition of antennas and amendment to approved site plan**

Applicant: Sconnix Realty Trust/ATS-Needham, LLC

Site: 1165 Chestnut Street

SBL: 51-45-5

Lot Area: 330,000 sq ft

Zoning: MR-1

Current Use: Wireless Communications

Proposed Use: Wireless Communications

Background:

The property consists of a 1249' tower with multiple antennas, related buildings and equipment. The tower was originally permitted as a television transmission tower by B.O. #105686 in 1954. Pursuant to Section 30-18A(e)(8) and in compliance with Board Order #462-05, condition #16(i), applicant seeks a special permit to legalize existing antennas and related equipment. Additionally, the applicant seeks to add an additional earth satellite dish, to replace and relocate a generator, and to amend the approved site plan including the addition of snow covers and sound reduction materials.

Administrative determinations:

- ◆ Section 30-18A(e)(5) requires a special permit for the addition of an earth satellite antenna dish.
- ◆ Section 30-18A(e)(8) requires a special permit for the modification or addition of wireless communication equipment on an existing tower in a residential district.
- ◆ Sections 30-18A(f) and 30-24 require site plan review.
- ◆ Section 30-18A(c)(2) requires removal of wireless communication equipment within thirty days following the cessation of its use.
- ◆ The applicant has submitted a copy of the application to the Director of Planning and Development for Administrative Site Plan review, per Section 30-18A(g) for compliance with Section 30-18A(c).
- ◆ See table "Zoning Relief Summary" following page.

ATTACHMENT E

Zoning Relief Summary		
Ordinance		Action Required
	Amendment to existing Board Orders	
30-18A(f)	Amend and consolidate special permits and site plans approved via Board Orders #105686, #781-73(2) and #462-05	X
30-21(b)	Extension of nonconforming structure and transmission station	SP per §30-24
	Use	
30-8(b)(9) 30-9(b)(1)	Approval of structures supporting a television receiving station in a residential district	SP per §30-24
	Wireless Communication Installation	
30-18A(e)(5)	Addition of satellite earth station antenna	SP per §30-24
30-18A(e)(8)	Modification and addition of wireless communication equipment on an existing tower in a residential district	SP per §30-24
	Site	
30-18A(f)	Approval of site plan per §30-23	X
	Request for Waiver	
30-18A(c)(2)	Removal of equipment within 30 days of cessation of use	X

Donald L. Haes, Jr., Ph.D., CHP

Radiation Safety Specialist

MA Radiation Control Program Health Physics Services Provider Registration #65-0017

PO Box 368, Hudson, NH 03051

Voice: 603-303-9959

Fax: 603-386-6315

Email: donald_haes_chp@myfairpoint.net

February 13, 2010

Re: Proposed installation of Clearwire personal wireless services antennas to be mounted on the lattice tower located at 1165 Chestnut Street in Newton, MA.

PURPOSE

I write in addendum to my report dated December 21, 2009 regarding the information pertinent to the proposed Clearwire installation. In furtherance of regulatory compliance determination, I have obtained measurements of the ambient RF fields near the site and surrounding areas. The physical conditions are that Clearwire antennas are proposed to be mounted on the existing lattice tower (See Figure 1). The proposal calls for both panel and back haul "dish" antennas to be mounted at centerlines of 115 feet and 250 feet above ground level [AGL], respectively. There are several existing antenna installations on this lattice tower. The measured values of power density are presented as a percent of current Maximum Permissible Exposures [%MPE] as adopted by the Federal Communications Commission [FCC] ^{1,2}, and those established by the Massachusetts Department of Public Health [MDPH] ³ (100% signifying an acceptable amount).

SUMMARY

The measured ambient RF field levels indicate the maximum to be less than five percent of the current State and Federal exposure guidelines. The measured levels are well with the established FCC and the MDPH guidelines for RF exposure. These RF measurements are accurate, and meet both FCC and the MDPH guidelines.

Based on the RF fields I have measured, and the theoretical RF fields previously calculated, it is my expert opinion that this facility would comply with all regulatory guidelines for RF exposure to members of the public with the addition of the Clearwire personal wireless services antennas.

Note: The analyses, conclusions and professional opinions are based upon the precise parameters and conditions of this particular site; **Lattice tower located at 1165 Chestnut Street in Newton, MA.** Utilization of these analyses, conclusions and professional opinions for any personal wireless services installation, existing or proposed, other than the aforementioned has not been sanctioned by the author, and therefore should not be accepted as evidence of regulatory compliance.

ATTACHMENT F

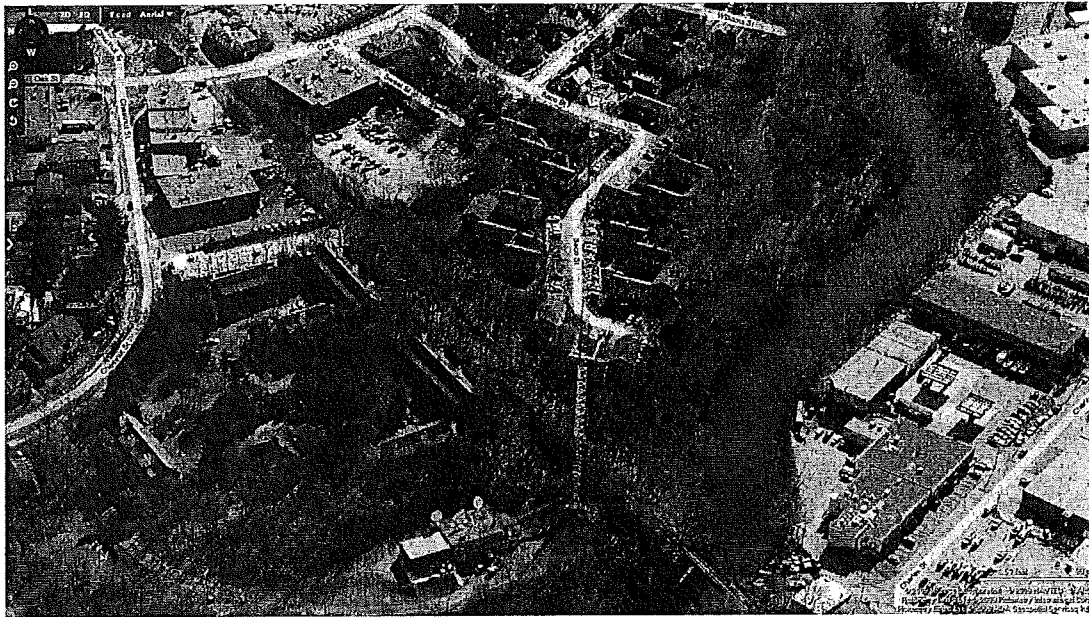


Figure 1: Lattice Tower at 1165 Chestnut Street in Newton, MA
(Picture courtesy Microsoft® Virtual Earth™ and may not represent current conditions)

RF EXPOSURE LIMITS AND GUIDELINES

The RF exposure guidelines adopted by the FCC are a combination of the standards published by the American National Standards Institute (ANSI) ⁴ and the National Council on Radiation Protection and Measurement (NCRP) ⁵. Also applicable are those published by the MDPH ³. The RF exposure guidelines are divided into two categories: "Controlled/Occupational areas" (those areas restricted to access by RF workers only) and "Uncontrolled/Public Areas" (those areas unrestricted for public access). Listed in Table 1 below are the applicable RF exposure guidelines for uncontrolled areas as they pertain to the operating frequency band of the proposed Clearwire wireless services.

Table 1: Maximum Permissible Exposure Values for Uncontrolled/Public Areas

Frequency Band:	Maximum Permissible Exposure:
1500 - 100,000 MHz	1000 $\mu\text{W}/\text{cm}^2$ *

Note: 1 μW = 0.000001 Watt

* For equivalent plane-wave power density, where f is the frequency in MHz (10^6 Hz).

MEASUREMENT PROTOCOL

RF field measurements were obtained on February 13, 2010, using accepted scientific procedures.^{6,7} The temperature was 36°F with sunny skies. The measuring equipment included a Narda model 8715 Electromagnetic Radiation Meter with model B8742D Broadband Isotropic Probe. The probe of choice in a mixed-frequency environment is the broadband type - that is, it responds to a wide range of frequencies.

The Narda model B8742D probe provides a meter read-out in %MPE (percent FCC 1997 Maximum Permissible Exposure) **for members of the general public** within the frequency band of 300 kHz to 3 GHz (**NOTE:** 1 kHz = 1,000 cycles per second, 1 MHz = 1,000,000 cycles per second, and 1 GHz = 1,000,000,000 cycles per second).

The RF field measurements were obtained during normal use of the existing transmitters. The measurements were obtained at several locations in the general vicinity of the tower (See map, Figure 2). At each location, measurements were obtained by continuously scanning an area from the ground plane up to a height of six feet above ground level, referred to as the "Spatial Average". The spatial average readings at each location were recorded as %MPE. In addition, the highest reading during the spatial average was recorded as the "peak" reading. The results of the RF field measurements are listed in Table 2, with the relative locations depicted in Figure 2.

The accuracy of the measurement system is a combination of the following* : instrument accuracy, $\pm 1.0\%$; calibration uncertainty, + 0.5 dB (1.122), - 0.5 dB (0.891); and probe isotropy error, + 0.75 dB (1.189), - 0.75 dB (0.841). A conservative approach is to obtain the root-sum-square (RSS) of the three factors as follows:

- ▶ If the meter reads high, $RSS = [(0.01)^2 + (0.122)^2 + (0.189)^2]^{1/2}$, or 22.5 % higher than true value; the correction factor is $1/1+RSS = 0.816$.
- ▶ If the meter reads low, $RSS = [(0.01)^2 + (1-0.891)^2 + (1-0.841)^2]^{1/2}$, or 19.3 % lower than true value; the correction factor is $1/1-RSS = 1.24$.

For this RF exposure analysis, the readings were multiplied by 1.24 to be conservative.

* The NARDA Microwave Corporation, 435 Moreland Road, Hauppauge, NY, 11788.

RESULTS

Table 2: Results of Broadband RF Field Measurements Vicinity of Lattice Tower at 1165 Chestnut Street in Newton, MA		
Location, See Figure 2	Spatial Average Reading	Peak Meter Reading
	%MPE _(public) [†]	%MPE _(public) [†]
1	1.7	3.0
2	1.9	3.2
3	1.8	3.6
4	2.1	4.2
5	1.1	2.6
6	1.0	2.5
7	1.3	3.0
8	1.2	2.9
9	1.5	3.5
10	1.4	2.4
[†] Meter readings in percent FCC MPE for the public, and multiplied by 1.24.		



**Figure 2: Locations of RF Field Measurements
Vicinity of Lattice Tower at 1165 Chestnut Street in Newton, MA**

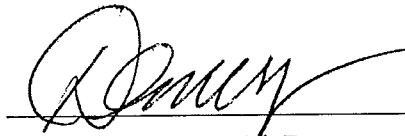
CONCLUSION

The measured ambient RF field levels indicate the maximum to be less than five percent of the current State and Federal exposure guidelines. The measured levels are well with the established FCC and the MDPH guidelines for RF exposure. These RF measurements are accurate, and meet both FCC and the MDPH guidelines.

Based on the RF fields I have measured, and the theoretical RF fields previously calculated, it is my expert opinion that this facility would comply with all regulatory guidelines for RF exposure to members of the public with the addition of the Clearwire personal wireless services antennas.

Feel free to contact me if you have any questions.

Sincerely

A handwritten signature in black ink, appearing to read 'D. Haes', written over a horizontal line.

Donald L. Haes, Jr., Ph.D
Certified Health Physicist

Note: The analyses, conclusions and professional opinions are based upon the precise parameters and conditions of this particular site; **Lattice tower located at 1165 Chestnut Street in Newton, MA.** Utilization of these analyses, conclusions and professional opinions for any personal wireless services installation, existing or proposed, other than the aforementioned has not been sanctioned by the author, and therefore should not be accepted as evidence of regulatory compliance.

Donald L. Haes, Jr., Ph.D., CHP

Radiation Safety Specialist

MA Radiation Control Program Health Physics Services Provider Registration #65-0017

PO Box 368, Hudson, NH 03051

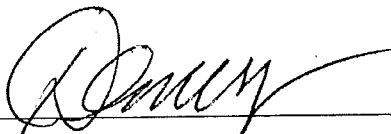
Voice: 603-303-9959

Fax: 603-386-6315

Email: donald_haes_chp@myfairpoint.net

STATEMENT OF CERTIFICATION

1. I certify to the best of my knowledge and belief, the statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are personal, unbiased professional analyses, opinions and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report and I have no personal interest or bias with respect to the parties involved.
4. My compensation is not contingent upon the reporting of a predetermined energy level or direction in energy level that favors the cause of the client, the amount of energy level estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
5. This assignment was not based on a requested minimum environmental energy level or specific power density.
6. My compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this report.
7. The consultant has accepted this assessment assignment having the knowledge and experience necessary to complete the assignment competently.
8. My analyses, opinions, and conclusions were developed and this report has been prepared, in conformity with the American Board of Health Physics [ABHP] statement of standards of professional responsibility for Certified Health Physicist.



Donald L. Haes, Jr., Ph.D

Certified Health Physicist

February 13, 2010

Date

ENDNOTES

- 1 . Federal Register, Federal Communications Commission Rules; *Radiofrequency radiation; environmental effects evaluation guidelines* Volume 1, No. 153, 41006-41199, August 7, 1996. [47 CFR Part 1; Federal Communications Commission].
- 2 . Telecommunications Act of 1996, 47 USC; Second Session of the 104th Congress of the United States of America, January 3, 1996.
- 3 . 105 CMR 122.000; Massachusetts Department of Public Health, *Non-Ionizing Radiation Limits for: The General Public from Non-Occupational Exposure to Electromagnetic Fields, Employees from Occupational Exposure to Electromagnetic Fields, and Exposure from Microwave Ovens*.
- 4 . ANSI/IEEE C95.1-1999: American National Standard, *Safety levels with respect to human exposure to radio frequency electromagnetic fields, from 3 KHz to 300 GHz (Updated in 2005)*.
- 5 . National Council on Radiation Protection and Measurements (NCRP); *Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields*, NCRP Report 86, 1986.
- 6 . ANSI/IEEE C95.3-1999: American National Standard, *Recommended Practice for the Measurement of Potential Electromagnetic Fields - RF and Microwave*.
- 7 . NCRP Report No. 119: National Council on Radiation Protection and Measurements, 1993; *A Practical Guide to the Determination of Human Exposure to Radiofrequency Fields*.

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January 12, 2007

Imge Ceranoglu
Daylor Consulting Group
10 Forbes Road
Braintree, MA 02184

iceranoglu@daylor.com

Subject: Outdoor Equipment Sound Levels, Newton Tower

Dear Imge,

This report summarizes recent work in connection with outdoor equipment serving the transmitter station building in Newton, MA.

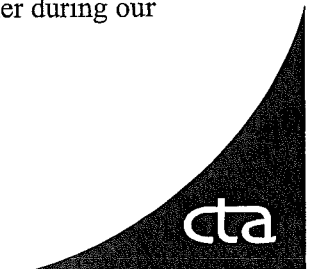
As requested, we visited 1165 Chestnut Street in Newton, MA during the evening (roughly 7 pm until 10 pm on October 10, 2006), for measurements of noise levels from existing equipment at the site.

Figure 1 is a site plan indicating the measurement locations, as follows:

- Location 1 is on the property line, at a location nearest to the equipment pad that is on the back side of the building.
- Location 2 is up a hill, beyond the property line, outside of the nearest residential building, at its closest location to this same equipment pad.
- Location 3 is on the opposite side of the building, at the far edge of the parking area that is overlooked by an emergency generator.

Sound levels were measured in dBA, which indicates that the overall sound level was A-weighted, in accordance with standard practice. Sound levels were measured using a Type 1 sound level, which was calibrated before and after our measurements. The weather during our visit was clear, calm, and relatively warm.

MEMBER FIRM, NATIONAL COUNCIL OF ACOUSTICAL CONSULTANTS



ATTACHMENT G

We were also asked to calculate anticipated levels of noise at the same locations, for noise generated by a proposed emergency generator, which is a 1000 kw generator by Katolight, to be installed in an acoustical enclosure and outfitted with critical grade mufflers.

Table 1 shows the results of our measurements and calculations, with measured and calculated levels shown in dBA.

TABLE 1: SOUND PRESSURE LEVELS (in dBA)

	All equipment except generator (measured)	Existing generator (measured)	Proposed generator (calculated)
Location 1 On property line closest to equipment pad	66	59	57
Location 2 At nearest building closest to equipment pad	60	60	58
Location 3 Edge of parking area overlooked by generator	57	87	85

Our calculated levels of noise were based on sound data provided to us by the manufacturer, for their gen set in an acoustical enclosure with critical grade mufflers.

Figure 2 is a partial site plan, showing the following:

- The transmitter station building (with equipment on the side facing away from the Charles River, and a proposed emergency generator on the side facing toward the Charles River).
- Condominium buildings, located on a hill which overlooks the transmitter station building.
- The background noise measurement location, where we located a sound level monitor, to be discussed below, which measured noise levels continuously over a several day period in late 2005. Note that in our judgement, this is the quietest spot on the entire property, relatively far from Rt. 128, far from the transmitter station building, and also far from Chestnut Street and its various activities.

Figure 3 shows the measured ambient noise levels at the background sound monitoring location, mentioned above. Figure 3 shows a classic “diurnal” (i.e., day/night) noise profile, with the quietest noise levels in the late night hours, and noise levels

increasing during rush hour, and with moderate levels of noise during daytime. For your reference, three separate descriptors are shown on Figure 3, as follows:

- L_{eq} is approximately the average sound level during the hour interval.
- L_1 is associated with highest levels from intermittent noises, such as automobile horns.
- L_{90} is the level which is exceeded 90% of the measurement interval, and L_{90} is universally considered to be the “background” noise level.

Figure 3 shows that the background noise levels (i.e., L_{90}) only dip below 50 dBA in the very late night hours, typically between midnight and 4:00 am. Otherwise, background noise levels are 50 dBA or more, and increase to 60 dBA (or above) during several periods, especially during rush hour.

We understand that the emergency generator is to be tested once per month (for approximately ½ hour), and once per year for two hours. The proposed generator would generate noise levels up to 58 dBA at the face of the nearest condominium building overlooking the transmitter station building. Based on our measurements and calculations, we would recommend the following:

- The ½-hour testing each month should occur during morning rush hour, roughly 6:00 – 7:00 am, so that noise levels are roughly equal to or even lower than expected background noise levels at the condominium location. Note that Figure 2 indicates that background noise levels can typically reach 60 dBA or higher during morning rush hour, but we anticipate that noise levels on this hill from Rt. 128 could be several dBA louder than at the background measurement location; this is because the hilltop location has a more direct view of a greater portion of Rt. 128.
- The two hour once-per-year test needs to occur during the evening or nighttime hours, and must last for two hours. We suggest that this test occur roughly 7:00 – 10:00 pm, in order to be masked very effectively by typical ambient noise throughout this area.

In addition to the generator, the outdoor equipment is being upgraded and/or replaced. Our goal is to assist with reducing overall noise from this other outdoor equipment.

We have received sound data for a heat exchanger which would be typical for new equipment (replacing existing equipment). Our calculations show that this new type of heat exchanger would to generate 44 dBA at the nearest property line. Note that this distance is very short (30 feet), and that this device is very quiet, in fact quieter than the lowest measured background noise level (see Figure 2) at the quietest location throughout the entire property. Therefore, future heat exchangers should be of this very quiet type.

For your reference, reducing noise from the existing equipment would involve the following:

- For existing A/C units, the owner should determine whether optional "noise control kits" are available to reduce noise from the compressor components. For your reference, such noise control kits typically consist of vibration isolation of the compressor, along with an insulation and sheet vinyl wrap for the compressor. This noise control kit greatly reduces the tonal component of the operation of such equipment.
- Pumps and other compressors should be either relocated to inside the building, or should be treated in a manner similar to the compressor components of the A/C units (i.e., insulation and sheet vinyl wrap).
- After the above steps, the remaining noise will come from fans. Typically, these fans do not have strong tonal components, but require generous quantities of airflow. The primary noise control for this type of equipment is acoustical barrier, which consists of solid panels (such as shown on Figure 4), which block direct transmission of sound, and also absorb reflected sound. Details of design for an acoustical barrier require input from mechanical engineers, such as for airflow requirements, but we anticipate that very significant reductions in noise would be available from construction of an acoustical barrier of between 8 and 12 feet tall, surrounding the equipment.

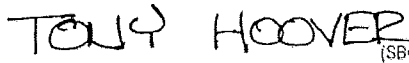
We understand that quieting of existing equipment and upgrades to quieter equipment should be completed within one year from approval of Special Use Permit, at which time we would measure the reduced levels of sound. If necessary, an acoustical barrier system will be constructed and installed (of materials and at the location to be indicated on plans prepared by Daylor Consulting Group).

In summary, we recommend that the emergency be tested when ambient noise levels are highest, and have outlined methods to reduce noise from other outdoor mechanical equipment.

Please do not hesitate to contact us for additional assistance.

Sincerely,

CAVANAUGH TOCCI ASSOCIATES, INC.

 (SBO)

K. Anthony Hoover

Kah/pac/06304

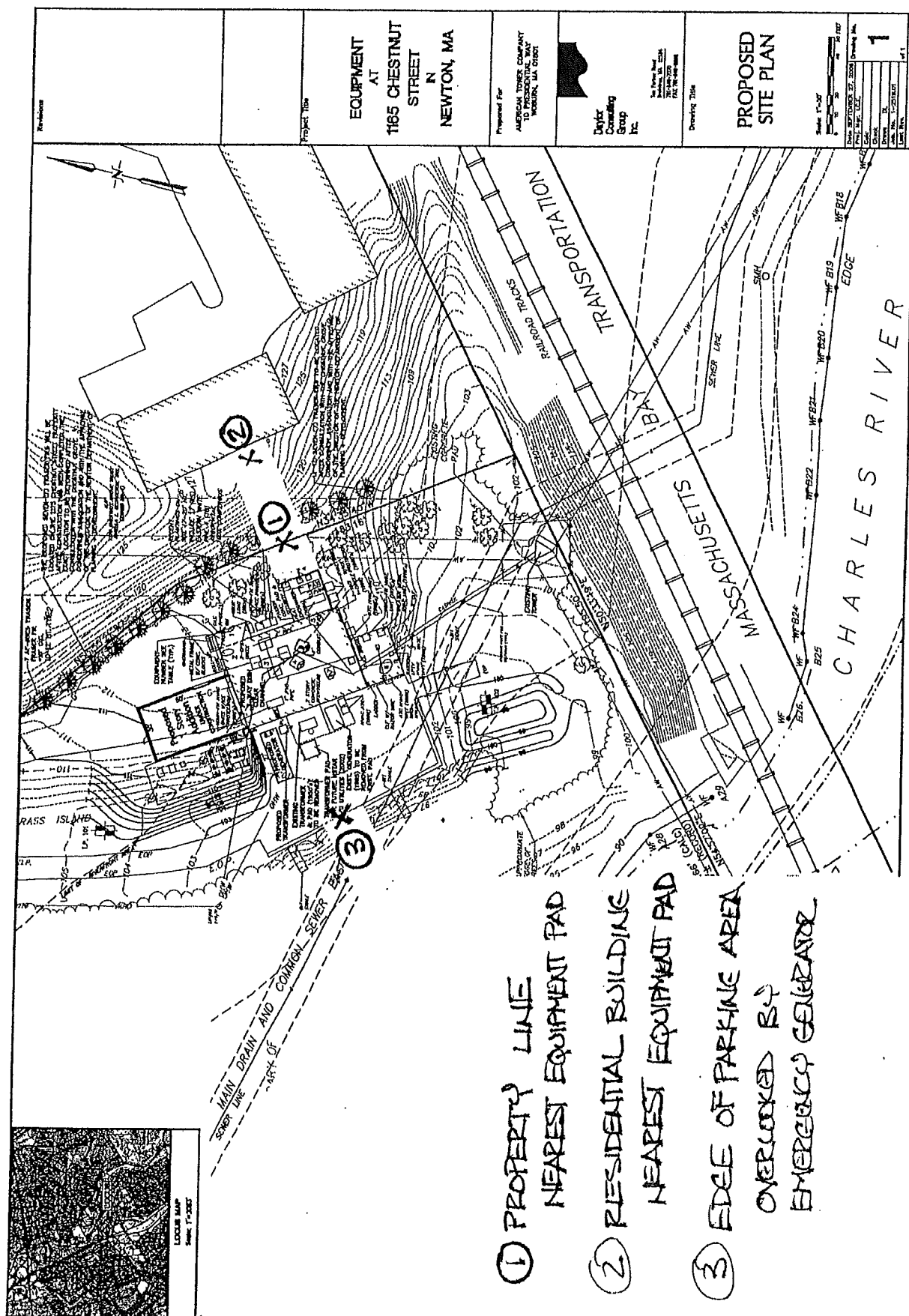


FIGURE 1. SITE PLAY SHOWING MEASUREMENT LOCATIONS

Background Sound Monitoring (QUIETEST LOCATION)

November 30, 2005 - December 2, 2005

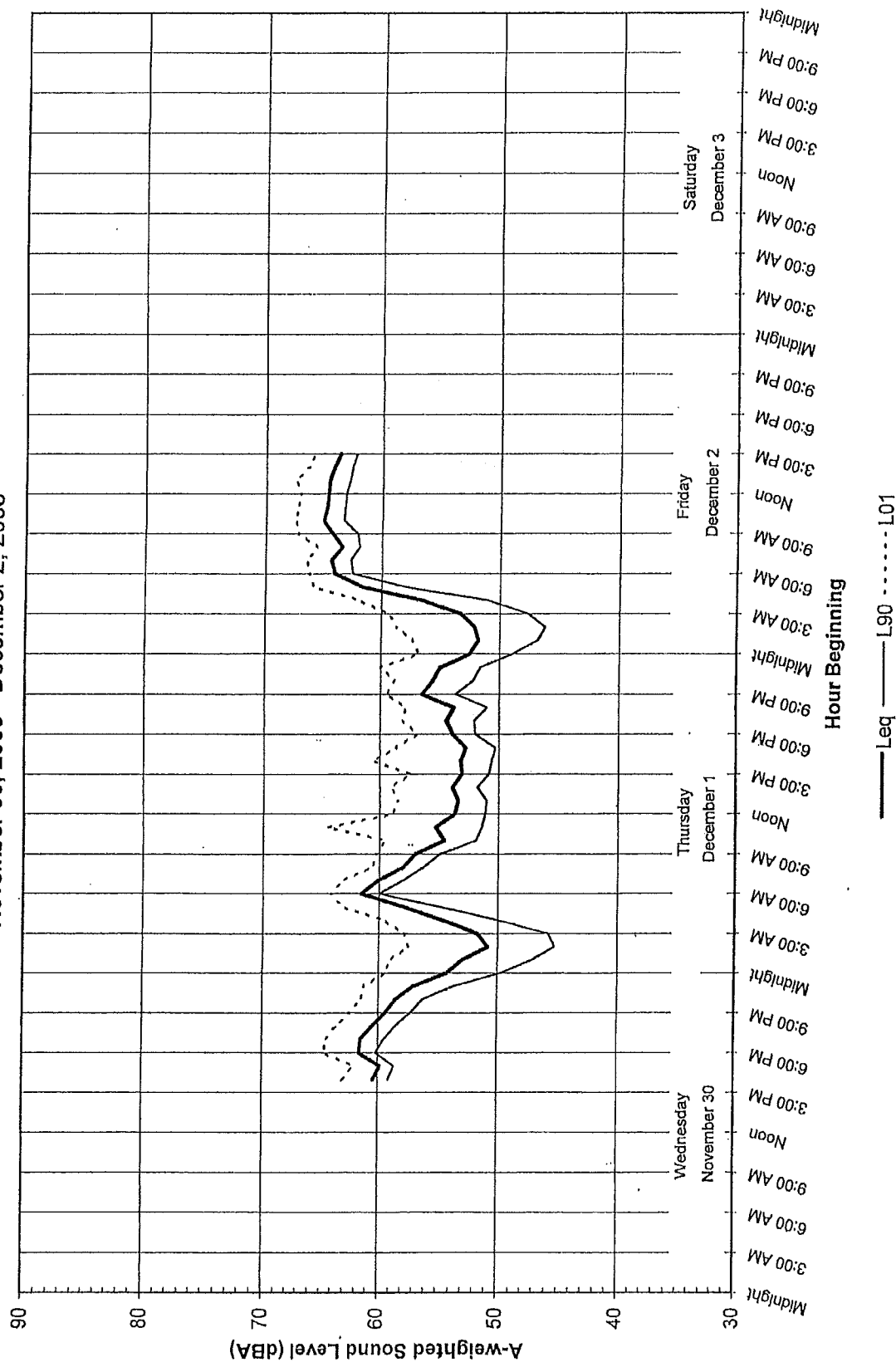


FIGURE 3. MEASURED AMBIENT NOISE LEVELS

ACOUSTIC CHARACTERISTICS

TRANSMISSION LOSSES IN dB

Preferred Oxave Bands (Hz)	63	125	250	500	1,000	2,000	4,000
2" thick	5	13	23	32	43	52	53
3" thick	8	16	26	35	46	55	58
4" thick	22	23	32	40	50	57	63
6" thick	25	23	47	55	56	59	66

Interlocking panel joints, corner panels and acoustic doors are designed and constructed to have transmission losses equivalent to the standard panels.

The noise reduction for full enclosures will approximate the transmission loss of the panels. The actual noise reduction is determined not only by the transmission loss, but also by the acoustics of the surrounding area and the amount of reflections involved.

Noise reduction of a partial enclosure is determined by the transmission loss, the absorption of the panels, and the size of the openings.

SOUND ABSORPTION COEFFICIENTS

Preferred Octave Bands (Hz)	125	250	500	1,000	2,000	4,000	Hz
2" thick	.40	.80	.59	.59	.59	.59	.95
3" thick	.55	.99	.99	.99	.99	.99	.95
4" thick	.76	.99	.99	.99	.90	.89	.95
5" thick	.95	.99	.99	.99	.90	.99	.95

823 and 077 nests by *Flammula leucosticta*! 10 August 1995

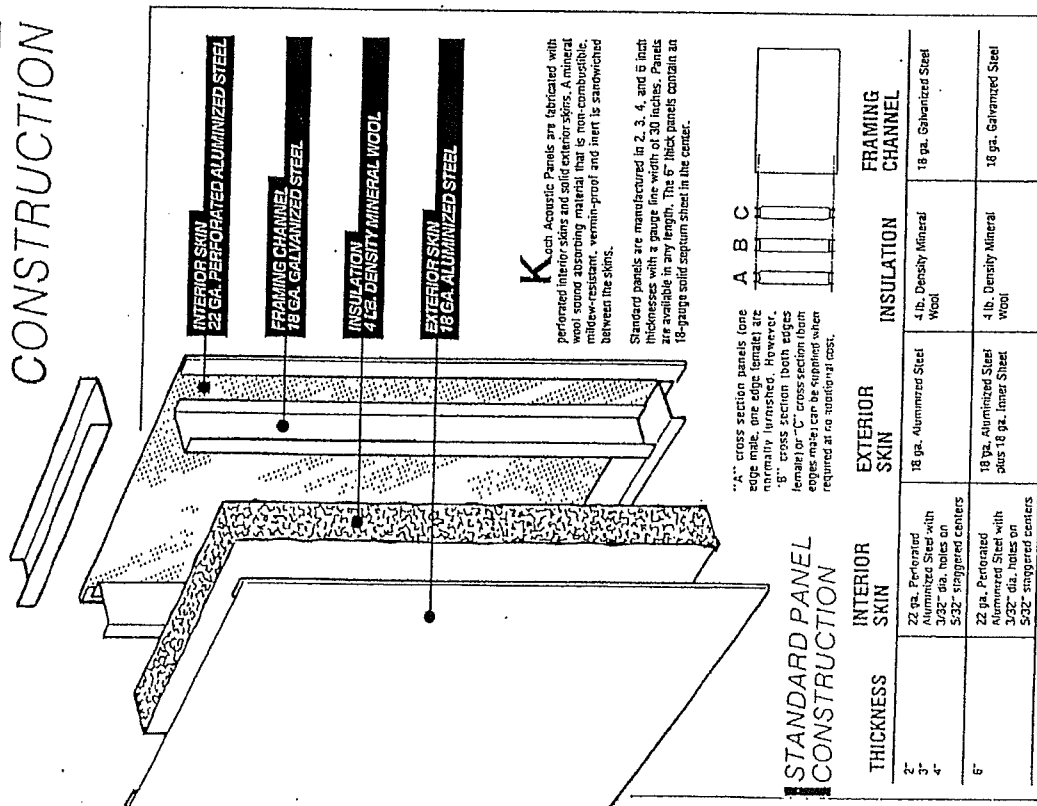


FIGURE 4. ACOUSTICAL BARRIER PANELS